

DUFF *and* NORTON JACKS



CATALOGUE No. 113

226 9/39

Duff-Norton Jacks

The jacks described in the following pages are made by The Duff-Norton Manufacturing Company, the world's oldest and largest manufacturer of Lifting Jacks.

Fifty-five years specialized experience in the design and manufacture of lifting Jacks has resulted in the high standards of quality, strength, simplicity, safety, ease of operation, and long life, which make Duff-Norton the undisputed leader of the Jack industry.

Duff-Norton Jacks are used everywhere and in all lines of industry, such as railroading, ship building, bridge construction, contracting, excavating, mining, oil-well drilling, telephone cable work, automobile and truck repair, etc.

Duff-Norton Jacks are covered by patents in U.S.A. and Foreign Countries.

The Duff-Norton Manufacturing Co. also manufacture other jacks and other tools for special purposes. Our complete equipment for gear cutting and threading of all kinds enables us to quote attractive prices on standard and special gears and screws. Let us estimate upon your next work of this character, without obligation, of course.

When you require a jack for any purpose whatever, there is a Duff-Norton Jack best suited for that work. Ask your dealer or write us for full information.

THE DUFF-NORTON MANUFACTURING COMPANY

General Offices, Pittsburgh, Pa., U. S. A.

Canadian Plant

The Canadian Duff-Norton Co., Ltd.,
Coaticook, P. Q. Canada

Branch Offices

Empire State Building
NEW YORK, N. Y.

Peoples Gas Building
CHICAGO, ILL.

Monadnock Building
SAN FRANCISCO, CALIF.

Union National Bank Bldg.
HOUSTON, TEXAS

Railway Exchange Building
ST. LOUIS, MO.

Uniform Excellence Assured by Duff-Norton Manufacturing Facilities

Each of the following carefully managed departments has its share and responsibility in building the finest jacks money can buy.

The **ENGINEERING DEPARTMENT**, with its fifty-five years' experience in the designing of jacks, carefully studies and tests each model, and is constantly improving them or developing new ones.

The **LABORATORY** tests all raw material as soon as received to insure that it meets the rigid specifications set by the Engineering Department.

The **FORGE SHOP**, with its powerful hammers, produces drop-forged jack parts of greatest strength and density.

The **MACHINE SHOP**, modern in every detail, turns out finished material accurately machined, insuring close fit and true alignment of parts.

The **HEAT TREATING DEPARTMENT**, provided with the latest scientific methods of control, and run by experts, produces working parts as hard and strong as the art can make them.

The **INSPECTION DEPARTMENT** acts as a further assurance of the flawlessness and accuracy of the finished parts.

The **TESTING DEPARTMENT** makes a final test under **MOVING LOAD** of the assembled jack to check its rated capacity.

The **CANADIAN PLANT** with its exceptional facilities for production and distribution affords prompt shipment throughout the Dominion of Canada.

This complete chain of manufacturing links assures you of getting a thoroughly reliable tool, whenever and wherever purchased. You are certain of **DUFF-NORTON UNIFORM EXCELLENCE**.

Duff-Norton Air Motor Operated Power Jack



Capacity 50 to 100 Tons

This new Rotary Air Motor Operated Power Jack is made in four sizes and capacities as follows:

Jack No. 528-R—50 tons capacity for all loaded freight cars, tank cars and light locomotives.

Jack No. 536-R—50 tons capacity for all Coach work, including Pullmans, Diners, etc.

Jack No. 126-R—75 to 100 tons capacity for all heavy duty locomotive service.

Jack No. 144-R—75 to 100 tons capacity for all heavy duty service where high lift is desired.

These jacks are regularly furnished with Little Giant Rotary Type Air Motors as standard equipment; designed and adapted to same after exhaustive tests. Load is carried on special bronze nut pressed into steel tube. Top is drop forged from steel. The Automatic Shut-Off device automatically shuts off Air Motor when safe limit of travel is reached. The load is raised and lowered entirely by the Air Motor built into the jack. No manual effort is required. With the use of a "Y" connection, two jacks can be operated by one man. Jacks are mounted on 10" diameter 2½" face rubber tired wheels, affording easy transportation from one job to another. Ample and complete facilities are afforded for quick and easy lubrication.

Jack No.	Capac. Tons	Height Inches	Raise Inches	Diam. of Base Inches	Diam. of Head Inches	Weight Includ. Wheels	List Price
528-R	50	28	17	14	5	370	\$468.75
536-R	50	36	25	15	5	395	487.50
126-R	75-100	26	14	14	6½	448	562.50
144-R	75-100	44	30	16	6½	530	656.25

Duff-Norton Self-Lowering Jacks Governor Controlled



No. 2675 Furnished with or without wheels.

The Duff-Norton Self-Lowering Governor Control Jacks are the very latest development in high-speed jack design, embodying many features which have never before been available in jacks of this type.

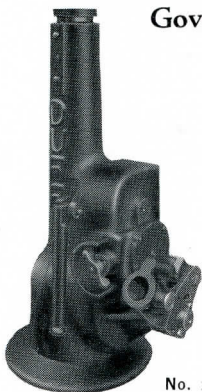
The principle of Governor Control of lowering speed of lifting jacks is entirely new and an exclusive Duff-Norton patent. The Governor absolutely controls the lowering speed, and this insures safety under all conditions.

When two or more jacks are used together under locomotives, cars, or other loads, the Governor makes it impossible for one jack to lower more rapidly than the others, thereby eliminating tipping or an uneven lowering of the load. No sudden dropping of load. No excessive wear. No shock to parts.

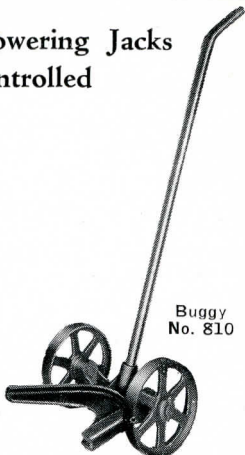
These Jacks can also be furnished with wheels as shown on page 11. Add \$15.00 to list price if wheels are desired.

Jack No.	Capacity Tons	Height Inches	Raise Inches	Weight Pounds	Code Word	Without Wheels
2075	75	20	6	330	Govre	\$285.00
2475	75	24	10	345	Govop	285.00
2675	75	26	12	360	Govmi	285.00
20100	100	20	6	330	Govso	305.00
24100	100	24	10	345	Gvos	305.00
26100	100	26	12	360	Govta	305.00

Duff-Norton Self-Lowering Jacks Governor Controlled



No. 2825



Buggy
No. 810

Duff-Norton Governor Controlled Jacks are safe, positive acting, reliable and most economical—especially where daily heavy duty is a continuous service demand.

The small head is a distinct advantage. It can be applied in congested places where otherwise the use of jacks with larger heads would be impossible. The small head also prevents applying eccentric loads which cause great strain on working parts and might cause a jack to stick when lowering.

Reduction gears in the governor controlled train are, with few exceptions, interchangeable in all types or tonnages. Rugged construction and accurate workmanship provide greater economical service.

Jack No.	Capacity Tons	Height Inches	Raise Inches	Weight Pounds	Code Word	List Price
2820	20	28	15 $\frac{1}{4}$	130	Govma	\$100.00
2825	25	28	15 $\frac{3}{4}$	181	Govet	125.00
2235	35	22	9 $\frac{3}{4}$	180	Govka	145.00
2635	35	26	13 $\frac{3}{4}$	185	Govbl	150.00
2835	35	28	15 $\frac{3}{4}$	190	Govga	155.00
2650	50	26	13 $\frac{1}{2}$	230	Govho	210.00
2850	50	28	15 $\frac{1}{2}$	240	Govte	220.00
3050	50	30	17 $\frac{1}{2}$	250	Govik	230.00
3650	50	36	23 $\frac{1}{2}$	270	Govlu	250.00

Duff-Norton Universal Buggy

The Duff-Norton Buggy No. 810, shown above, is designed especially for easy and convenient handling and transporting of Governor Controlled and other Jacks.

The bases of all DUFF-NORTON High and Standard Speed Jacks slide easily into the grooves of the buggy carriage. The jack is securely held in an upright position and wheeled about with ease. Also quickly and conveniently removed from the buggy.

Buggy No.	Weight in Pounds	Code Word	List Price
810	54	Govub	\$15.00

Duff - Norton

Governor Controlled Self-Lowering Jack for Empty Car Work



*To be Safe
"Use Screw Jacks"*

Jack No. 2819

This new model SELF-LOWERING JACK was designed to meet the insistent demand for an ABSOLUTELY SAFE JACK for raising and lowering empty cars.

Easy to operate—a SAFE ONE MAN JACK requiring a minimum of manual strength and effort. One man can operate jack to full capacity.

ABSOLUTELY SAFE fast lowering is accomplished by simply turning the thumb screw lock. The jack lowers the load automatically. No surge, no wobble, no danger. Governor controls the lowering speed.

SPEED—so essential, is positively assured. These jacks lift and lower the load faster than any other type of empty car jack.

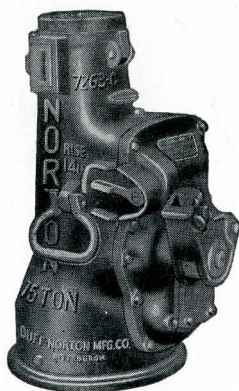
Light in weight—easily transported from one car to another. The foot lift will be found very suitable for low set loads.

Jack No. 3419 with high foot lift designed especially for handling Trolley Cars with low set bodies.

This jack readily adaptable for truck-trailer use by attaching special top. Write for particulars.

Jack No.	Height Inches	Raise Inches	Diam. Base Inches	Diam. Head Inches	Weight of Jack	List Price
2219	22	11	10	4¾	95 lbs.	\$68.00
2819	28	17	10	4¾	109 lbs.	68.00
3419	34	21	10	4¾	134 lbs.	80.00

Duff-Norton Self - Lowering Speed-Controlled Jacks



No. 7263 C

Inverted Type—High-Speed Design Capacities—75 and 100 Tons

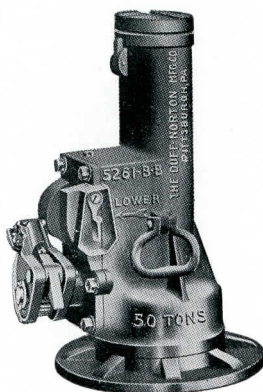
These models represent the very latest development in modern heavy duty Lifting Jacks and combine only those features that have fully stood the test of severe usage over many years' time.

The standard is semi-keyed, permitting it to be quickly turned up or down by hand, but to be rigidly held during operation. Lubrication of all parts is automatic, insuring long life and ease of operation. The extra high rise is a distinct advantage on certain classes of work.

Used for lifting locomotives, heavily loaded cars and all purposes where small head with heavy lifting capacity is required.

Jack No.	Capac. Tons	Height Inches	Raise Inches	Diam. of Base Inches	Weight Pounds	Code Word	List Price
7203-C	75	20	8	14	315	Caddy	\$285.00
7243-C	75	24	12	14	335	Cage	285.00
7263-C	75	26	14	14	347	Cater	285.00
1203-C	100	20	7½	14	325	Cold	305.00
1243-C	100	24	11½	14	342	Coke	305.00
1263-C	100	26	13½	14	358	Concur	305.00

Duff-Norton Self - Lowering Speed-Controlled Jacks



No. 5261 BB

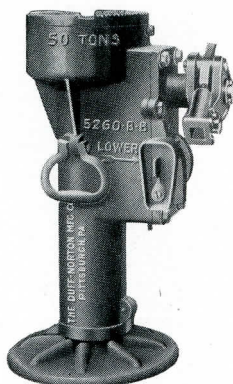
Inverted Type Capacities—25, 35 and 50 Tons

Used for lifting locomotives, loaded freight cars, passenger coaches, Pullman sleeping cars, dining cars and all general heavy lifting purposes. The small head permits placing the jack squarely under the load.

For coaches and Pullmans, Style 5361 BB is recommended—its long lift enables the trucks to be removed without re-blocking.

Jack No.	Capac. Tons	Height Inches	Raise Inches	Diam. of Base Inches	Weight Pounds	Code Word	List Price
2261-BB	25	26	14	12	155	Ink	\$125.00
2301-BB	25	30	18 $\frac{3}{8}$	12	168	Iberia	125.00
3261-BB	35	26	13 $\frac{3}{4}$	12	190	Income	150.00
3301-BB	35	30	17 $\frac{1}{2}$	12	195	Ice	160.00
5241-BB	50	24	12	14	257	Idol	210.00
5261-BB	50	26	14	14	266	Ivy	210.00
5301-BB	50	30	18	14	280	Impel	230.00
5361-BB	50	36	24	14	310	Iris	250.00

Duff-Norton Self - Lowering Speed-Controlled Jacks



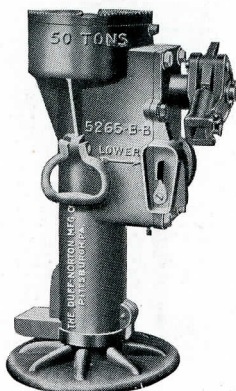
No. 5260 BB

Large Head Type Capacities—25, 35 and 50 Tons

These sturdy jacks are designed for all general lifting purposes where low load foot lift is not required. The load is lowered without any manual effort by simply pressing the lowering lever on side of jack. Operate smoothly and easily under full rated capacity load.

Jack No.	Capac. Tons	Height Inches	Raise Inches	Diam. of Base Inches	Weight Pounds	Code Word	List Price
2260-BB	25	26	14½	12	150	Sedan	\$120.00
2300-BB	25	30	18¾	12	170	Sheep	125.00
3260-BB	35	26	14½	12	187	Sauce	150.00
3300-BB	35	30	18¾	12	195	Scot	160.00
5200-BB	50	20	9¾	14	245	Seed	205.00
5240-BB	50	24	12¾	14	248	Song	210.00
5260-BB	50	26	14¾	14	262	Sand	210.00
5300-BB	50	30	18¾	14	285	Sack	230.00
5360-BB	50	36	24½	16	317	Sound	250.00

Duff-Norton Self-Lowering Speed-Controlled Foot-Lift Jacks



No. 5265 BB

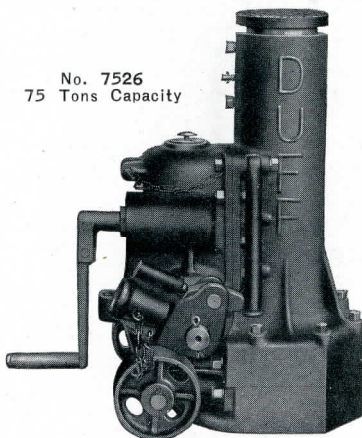
Large Head Type Capacities—25 to 100 Tons

These jacks are equipped with foot lift for handling low set loads. The full rated capacity of the jack can be lifted on the head, but we do not guarantee the foot lift beyond one-half the rated capacity of the jack. Especially suitable for bridge and wrecking work and all general lifting purposes. These jacks are speedy, durable and absolutely safe.

Jack No.	Capac. Tons	Height Inches	Raise Inches	Diam. of Base Inches	Weight Pounds	Code Word	List Price
2265-BB	25	26	14½	12	158	Soda	\$125.00
3225-BB	35	22	11	12	170	Slug	150.00
3265-BB	35	26	13¾	12	196	Snow	155.00
5205-BB	50	20	8½	14	245	Shine	215.00
5245-BB	50	24	12	14	267	Sky	220.00
5265-BB	50	26	14	14	275	Silk	225.00
7265-BB	75	26	12	14	394	Pride	305.00
1265-BB	100	26	12	14	420	Ruby	310.00

Duff-Norton Crank Lowering Ball-Bearing Screw Jacks

No. 7526
75 Tons Capacity



These powerful screw jacks are of inverted design; ratchet case being located in the base and not moving up with load. Maximum clearance for lever operation is obtained at first stroke and maintained while raising.

Design permits using a head of minimum size. Loads are applied so near the axis of the standard as to prevent excessive eccentric stresses. The jack is easily applied in cramped spaces.

Steep pitch double thread screws make these jacks extremely rapid for their capacity. Friction reduction makes them easy to operate. Screw of special alloy steel, heat-treated, turns in bronze nut of special composition. Accurately machined moving parts reduce friction and eliminate lost motion.

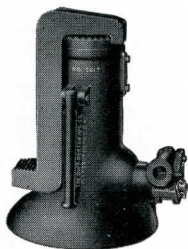
Rotating crank handle controls the speed of lowering. The load can be stopped instantly with absolute safety at any lowering speed. To lower jack when unloaded, press down button on top of bonnet while cranking.

Jack No.	Capacity Tons	Height Inches	Raise Inches	Weight of Jack	Code Word	List Price
5026-A	50	26	14	289	Honor	\$210.00
5028-A	50	28	16	295	Hortl	220.00
7520-A	75	20	6	384	Honey	300.00
7524-A	75	24	10	406	Hunch	300.00
7526-A	75	26	12	419	Hulk	300.00
10020	100	20	6	384	Hulis	320.00
10024	100	24	10	406	Hulot	320.00
10026	100	26	12	419	Hulme	320.00

Duff-Norton Low Height, Inverted 50-Ton Screw Jacks



No. 5016



No. 5017

The No. 5017 inverted jack features a foot lift. Especially adapted for locomotive and bridge work where a jack with low lifting height is required. The foot lift is made of alloy cast steel and can be instantly removed. Large ball-bearings and bearing plates are used which insure long life. The standard is provided with a key to prevent rotation. A very powerful, yet easy operating jack and one that will stand up under hard usage. Jack No. 5017 Supersedes Former No. 5071.

The No. 5016 low height ball-bearing screw Jack is of sturdy design, convenient to spot, easy to operate and durable under continual severe usage. It does not have foot lift, and is intended for head lift only.

Jack No.	Capac. Tons	Height Inches	Raise Inches	Diam. of Base Inches	Weight Pounds	Code Word	List Price
5017	50	19¾	7	15	180	Carl	\$135.00
5016	50	16	7	8	110	Obfs	122.50

No. 5017 Furnished Without Foot Lift, **\$127.00** List

Duff-Norton Ball-Bearing Inverted Bridge Jack



No. 915

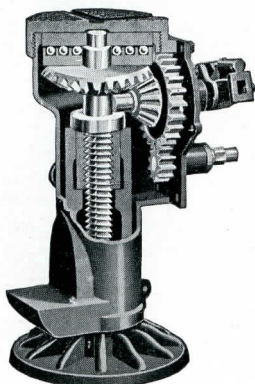
Capacity—15 Tons

A new Duff-Norton Ball Bearing Screw Jack especially designed for certain bridge work such as lifting stringers, etc. Light in weight, finely built and fast in operation. Designed with a hardened carbon Steel Screw, revolving in a special alloy bronze nut, assuring ease of operation. Absolutely safe up to its rated capacity. The base is made short on one end so that the Jack can be located close to adjoining sills, etc. This Jack can also be adapted to a multitude of other uses.

Supplied with a 39" operating lever, one end of which is made into a pinch bar.

Jack No.	Capacity Tons	Height Inches	Raise Inches	Size of Base Inches	Dia. of Head Inches	Wt. Lbs.	Code Word	List Price
915	15	14¾	9	6 x 7½	3⅝	40	Frank	\$45.00

Duff-Norton Ball-Bearing Bridge and Wrecking Jacks (Compound Geared)



No. 93

Capacities—75 and 100 Tons

These jacks are designed for extra heavy bridge and other work, and the capacity is fully guaranteed.

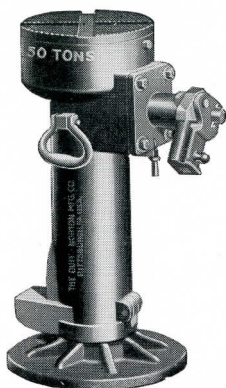
When raising light load (30 to 40 tons) on compound geared jacks, ratchet can be used on UPPER shaft, which gives MORE SPEED.

When full power of jack is required, use ratchet on LOWER shaft.

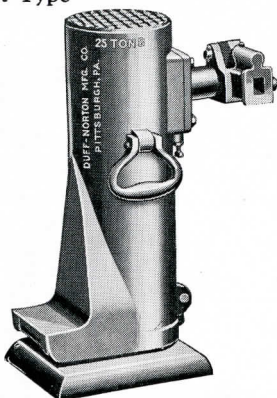
N. B.—These jacks are all rated for head lift. We do not guarantee the foot-lift beyond one-half the rated capacity of the jack.

Jack No.	Capac. Tons	Height Overall Inches	Raise Inches	Diam. of Base Inches	Weight Pounds	Code Word	List Price
93	75	27	11 $\frac{3}{8}$	14	329	Absurd	\$200.00
99	100	27	12	14	375	Almond	300.00

Duff-Norton Ball-Bearing Bridge and Wrecking Jacks Foot Lift Type



No. B-5024



No. B-2522

These jacks are especially suitable for rough outdoor usage, all working parts being of sturdy design. Every part is accurately finished to gauges, to insure easy and positive movement and prompt, easy replacement.

Minimum effort is required to handle the load on account of leverage used.

Convenient carrying handles are provided—one on either side of frame. Foot lift, rated at half the capacity of the jack, is very convenient for handling low loads.

These jacks are designed for heavy duty of any character, such as bridge work, handling of heavy machinery, by contractors for construction work, and for mill and shop work.

Jack No.	Capac. Tons	Height Inches	Raise Inches	Diam. of Base Inches	Weight Pounds	Code Word	List Price
B 1522	15	22	10	7½x7½	105	Abyss	\$ 60.00
*F	15	24	12	8x9	128	Fruit	65.00
60	15	26	13	8x9	130	Omar	70.00
B 2522	25	22	10¼	8x9¾	140	Adjust	90.00
B 2526	25	26	14¾	8x9¾	157	Atlas	96.00
B 3522	35	22	10⅝	9x10½	171	Absent	130.00
B 3526	35	26	14	9x10½	201	Amber	138.00
B 5024	50	24	9⅝	14	266	Alto	150.00
B 5027	50	27	13¾	14	298	Anchor	150.00

*Style F jack is designed to give double speed over other types listed.

Duff-Norton Ball-Bearing Locomotive and General Purpose Jacks



No. C-35

Capacities—15, 25 and 35 Tons

These jacks are very useful for heavy work of any character, including bridge work, car repairing, and the handling of heavy structural material. Especially suitable for rough outdoor usage, all working parts being of sturdy design.

Each jack is designed with carrying handles, one on each side of the jack, and is furnished with a steel operating bar.

Jack No.	Capac. Tons	Height Inches	Raise Inches	Diam. of Base Inches	Weight Pounds	Code Word	List Price
G. B.	15	22	9½	10	98	Eaton	\$ 60.00
N. A. 20	25	20	8	12	133	Canon	80.00
N. A. 26	25	26	14	12	164	Celery	90.00
N-100	35	20	8½	14	160	Clay	125.00
C-35	35	26	13	12	175	Clio	125.00

Duff-Norton General Purpose Jacks With Cone Bearings



No. G. F.

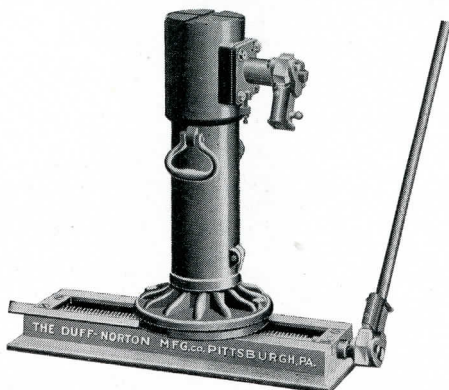
These jacks are similar to the heavy duty jacks, except that these have cone bearings instead of ball bearings. Used for general industrial purposes for lifting of light loads. Easy operation and light weight are features.

Especially adapted for carpenters and builders, boiler makers, truckmen, millwrights, etc.

These jacks are all rated for head lift. We do not guarantee the foot-lift beyond one-half the rated capacity of the jack.

Style	Capacity Tons	Height Overall Inches	Raise Inches	Size of Base Inches	Dia. of Head Inches	Wt. Lbs.	Code Word	List Price
N.J.	10	14	5¾	6x7½	4	55	Gale	\$31.00
S	15	21⅞	11½	8½ dia.	4⅝	70	Street	34.00
Y	15	20	8¼	7¾ x 7¾	4¾	98	Gent	44.00
G.F.	15	22	9½	7½ x 7½	4⅞	105	Ham	45.00

Duff-Norton Ball-Bearing Traversing Jacks Complete



No. 326

This combination of Ball-Bearing Screw Jack mounted on a traversing base has many uses and although designed for locomotive use in case of derailment, it is also well suited for use as a general purpose jack. It permits lifting the load and moving it horizontally at the same time. The jack can be easily taken off the traversing base and used separately if desired. List prices shown below include both Ball-Bearing Screw Jack and Traversing Base complete with operating levers.

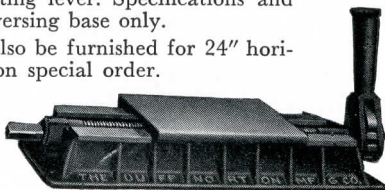
Jack No.	Capacity Tons	Style of Jack Used	Style of Base Used Inches	Height Over All Inches	Raise Inches	Code Word	List Price
124	15	G. B.	15	26	9½	Band	\$100.00
220	25	N.A. 20	15	24	8	Bike	120.00
224	25	N.A. 24	15	28	11	Bale	135.00
226	25	N.A. 26	20	30	14	Balloon	140.00
320	35	N-100	20	24	8½	Bean	175.00
326	35	C-26	20	30	13	Bated	175.00
524	50	B-50-24	20	28	9¾	Bolt	200.00
527	50	B-50-27	20	31	13¾	Balsam	200.00
727	75	93	20	31	11¾	Bone	250.00

Duff-Norton Traversing Bases For Any Type of Jack

For moving jacks horizontally while under load. Any screw or ratchet jack can be furnished mounted on one of these bases. Each base furnished with operating lever. Specifications and price apply to traversing base only.

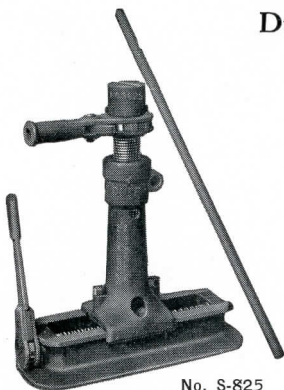
No. 40TB can also be furnished for 24" horizontal movement on special order.

No. 40TB



Jack No.	Capacity Tons	Height Inches	Horizontal Movement Inches	Weight Lbs.	Size of Plate Inches	Code Word	List Price
39TB	35	3 $\frac{3}{4}$	15	75	10 $\frac{3}{8}$ dia.	Battle	\$35.00
40TB	50	4	15	106	10x12	Trab	40.00
41TB	50	4	20	140	14 dia.	Bacon	50.00

Duff-Norton Screw Jack On Traversing Base



No. S-825

Although this jack has been designed for locomotive use in case of derailments and is used extensively for that purpose, it is also well suited for use as a general purpose jack, moving the load horizontally as well as lifting it. Furnished with a solid steel operating lever which is also used as a carrying handle.

Jack No.	Capacity Tons	Height Inches	Raise Inches	Horiz. Travel Inches	Weight in Lbs.		Code Word	List Price
					Jack	Lever		
S-825	35	24	10 $\frac{1}{2}$	12	135	20	Inez	\$40.00

Duff-Norton

Extensible Steel Trench Braces



Two-Way Nut



Three-Way Nut

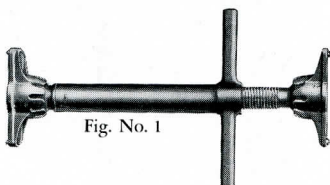


Fig. No. 1

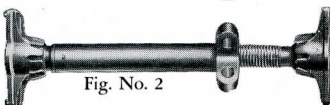
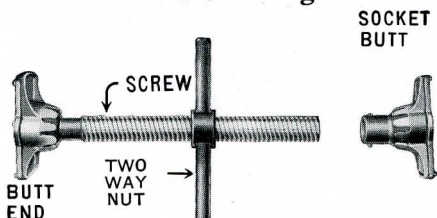


Fig. No. 2

These Braces are regularly furnished with Two-Way Lever Nut, as shown in Fig. No. 1, but can be furnished with Three-Way Nut, as shown in Fig. No. 2, for Pinch Bar use, when desired. The Two-Way Lever Nut provides great strength and safeguards against bending or breaking. The Three-Way Nut will be found advantageous when working in close quarters. Unless otherwise specified, the Two-Way Lever Nut will be furnished on all orders. The Ball and Socket Joint at each end permits easy adjustment to any angle. Lugs on the face of each shoe sink deeply into the sheeting and hold firmly regardless of sliding or unevenness of trench. They are easily adapted to any width trench by using longer or shorter lengths of standard black pipe.

Brace No.	Pipe and Screw Diam. Inches	Length of Brace Closed Inches	Length of Screw Inches	Safe Exten. of Screw Inches	Weight Pounds per Dozen	Code Word	List Price per Dozen
1001	1½	16	10	6	180	Abaft	\$46.00
1002	1½	18	12	7	200	Aband	46.00
1003	1½	21	14	8	212	Abase	48.00
1004	1½	24	14	8	221	Abba	48.00
1005	1½	27	16	9	240	Abdal	52.00
1006	1½	30	16	9	247	Abear	52.00
1007	1½	36	18	10	273	Abet	54.00
1008	1½	42	18	10	300	Abib	56.00
1009	1½	48	18	10	325	Acme	58.00
1011	2	36	18	10	538	Ader	102.00
1012	2	42	18	10	564	Acorn	104.00
1013	2	48	18	10	580	Ague	106.00
1014	2	54	18	10	608	Afar	108.00
1015	2	60	18	10	630	Alert	110.00

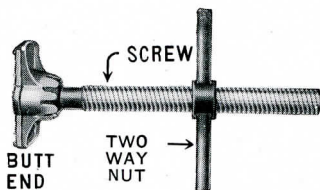
Duff-Norton Extensible Steel Trench Brace Fittings



Without Pipe. Adding Pipe Makes Brace Complete.

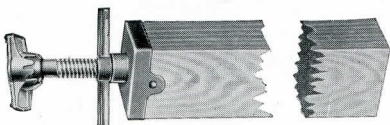
Brace Fitting No.	Diam. of Screw Inches	Length of Screw Inches	Safe Ext. of Screw Inches	Weight Pounds per Doz.	Code Word Complete	List Price Complete per Doz.	List Price Socket Butts Only per Doz.
C-14	1½	10	6	168	Bare	\$40.00	\$10.00
C-15	1½	12	7	174	Bait	40.00	10.00
C-16	1½	14	8	180	Bail	42.00	10.00
C-17	1½	16	9	186	Bar	44.00	10.00
C-18	1½	18	10	192	Baste	46.00	10.00
C-19	2	18	10	438	Beak	90.00	24.00

Duff-Norton Brace Screw End



Screw End No.	Diam. of Screw Inches	Length of Screw Inches	Safe Exten. of Screw Inches	Wt. Pounds per Dozen	Code Word Screw Ends Only	List Price Screw Ends Only per Doz.
C-32	1½	10	6	110	Sare	\$30.00
C-33	1½	12	7	117	Sabre	30.00
C-34	1½	14	8	126	Slab	32.00
C-35	1½	16	9	133	Sled	34.00
C-36	1½	18	10	142	Sad	36.00
C-37	2	18	10	322	Spear	66.00

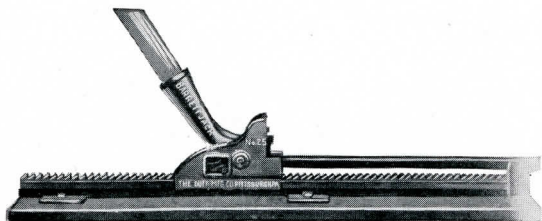
Duff-Norton Screw Fittings for Timber Braces



For bracing Mines, Subways and Excavations, as well as wide and deep Trenches.

Timber Brace No.	Diam. of Screw Inches	Length of Screw Inches	Size of Timber Caps Inches	Weight Pounds per Dozen	Code Word	List Price per Doz. Sets	Timber Caps per Dozen
C-24	1½	14	4x4	162	Tack	\$47.00	\$15.00
C-25	1½	14	6x6	192	Tag	52.00	20.00
C-29	1½	18	6x6	204	Tank	56.00	20.00
C-30	2	18	6x6	378	Tar	86.00	20.00
C-31	2	18	8x8	414	Teak	96.00	30.00

Duff-Norton Pipe Forcing Jack

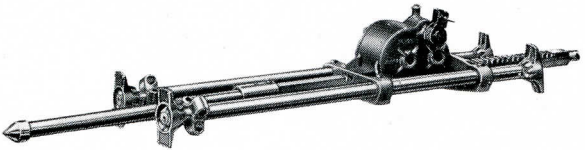


This unique jack has been successfully used by many public service companies and contractors for laying water, gas, and other pipe in places difficult of access—such as under lawns, railroad crossings, streets, etc.

It will force pipe, from ¾" to 4", through favorable ground conditions from 60 to 300 feet, eliminating digging long trenches. A trench 9 feet long is required for the operation of the jack at the starting point. Pipe can be forced 7½ feet before re-setting the jack for a new piece of pipe, which is then inserted to permit pushing the first length forward.

Jack No.	Capacity Tons	Total Length Feet	Travel of Cage Feet	Weight Pounds	Code Word	List Price
125	15	8½	7½	307	Pipe	\$75.00

Duff-Norton Pipe Pulling and Pushing Jack



Pipe pushing has not only been made easier and more simplified by this new member of the Duff-Norton line, but also the time consumed in doing a job of this nature has been cut down tremendously. No more need you tear up a lawn or a street, or burrow through a hillside to lay a pipe line, because Duff-Norton has solved your problem in a much more simple and efficient manner with this new Pipe Pusher. This jack was designed for pulling or pushing **WITHOUT CHANGING THE POSITION OF THE JACK**, which is braced in the pit after having been lined up in the direction which pipe or rod is to be pulled or pushed. The mechanism is of the geared type and represents the strongest construction and most powerful tool of this type on the market.

Jack No.	Length Feet	Travel Inches	Weight Pounds	Code Word	List Price
725	6	36	395	Parep	\$200.00

Jacks furnished with coupling for rack connection and pilots for end of pipe.

DUFF - NORTON BELL B

Size Screw and Height Stand Inches	Height Overall Closed Inches	Height Overall Extended Inches	Capacity Tons	Weight Each, Lbs.	List Price Each Jacks†	List Price Special Operating Lever
1x 6	8	12½	5	4	\$2.60	*
1¼x 4	6½	9	10	7	2.90	\$.60
1¼x 6	8½	13	10	9	3.10	.60
1¼x 8	10½	17	10	11	3.40	.60
1¼x10	12½	21	10	13	3.80	.60
1¼x12	14½	25	10	16	4.20	.60
1½x 4	6¾	9¾	12	11	3.25	.80
1½x 6	8¾	12¾	12	12	3.75	.80
1½x 8	10¾	16¾	12	14	4.25	.80
1½x10	12¾	20¾	12	15	4.75	.80
1½x12	14¾	24¾	12	19	5.25	.80
1½x14	16¾	28¾	12	26	6.00	.80
1¾x 6	9	13	16	14	4.50	1.00
1¾x 8	11	17	16	16	5.00	1.00
1¾x10	13	21	16	19	5.75	1.00
1¾x12	15	25	16	21	6.25	1.00
1¾x14	17	29	16	24	6.75	1.00
1¾x16	19	33	16	37	7.50	1.00
2x 5	8½	11	20	19	5.00	1.60
2x 6	9½	13	20	20	5.25	1.60
2x 8	11½	17	20	21	6.00	1.60
2x10	13½	21	20	25	6.75	1.60
2x12	15½	25	20	27	7.50	1.60
2x14	17½	29	20	32	8.25	1.60
2x16	19½	33	20	35	9.25	1.60
2x18	21½	37	20	50	10.25	1.60
2½x 6	10	13	24	34	7.75	2.40
2½x 8	12	17	24	38	8.75	2.40
2½x10	14	21	24	44	9.75	2.40
2½x12	16	25	24	49	10.75	2.40
2½x14	18	29	24	55	12.00	2.40
2½x16	20	33	24	64	13.25	2.40
2½x18	22	37	24	69	14.50	2.40
2½x20	24	41	24	72	15.75	2.40
3x 8	13	17	30	50	17.50	3.20
3x14	19	28	30	76	19.50	3.20
3x18	23	36	30	83	22.00	3.20
3x24	29	48	30	120	25.75	3.20

†List price of Jack does not include lever bar.

*Operating levers for size 1"x6" furnished with Jack on request.

Built in 38 sizes, Duff-Norton Bell Bottom Jack Screws conform to S.P.R. 97-30 issued by the United States Department of Commerce, Simplified Practice Division.

BOTTOM JACK SCREWS

Load Centers on Full

Complement of Balls

DUFF-NORTON again leads the way with a newer, safer, sturdier and faster Bell Bottom type Jack at no higher cost than other makes. The new Duff-Norton Bell Bottom Jack Screws outmode all other Jacks of this type in every possible way, with a multitude of distinctive features, a few of which are listed below:

- Load centers on a full complement of chrome molybdenum steel balls, rotating in a machine-cut, grease-packed channel, reducing friction to a minimum.

- Unbreakable, drop-forged steel top grips the load with deep, sharp perforations.

- One piece solid steel screw with forged head; handles its rated capacity quickly, easily.

- Extra heavy base double ribbed at throat, solid all the way 'round, not weakened by openings.

- As a result of greatly reduced friction, a minimum amount of manual effort is required to lift a load.

These and many other distinctive features make Duff-Norton the indisputable leader in the Jack industry.

BUY—TRY and COMPARE! You'll find Duff-Norton Bell Bottom Jack Screws are matchless!

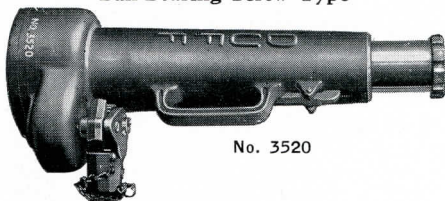
To insure safety and maximum lifting power, use Duff-Norton Heat Treated operating levers, forged from Special High Carbon Steel, with pinch-bar tip. Common steel bars will not handle full Jack capacity, and if used, rated capacities must be considerably reduced.



**JACK WILL NOT TWIST
FROM UNDER LOAD**

Duff-Norton Horizontal Jack

Ball-Bearing Screw Type



No. 3520

Designed for horizontal use in moving or pushing heavy equipment, machinery, structural material, etc. Used for bridge and construction work, and by industrial plants. Also by railroads for separating cars when blocking couplers for twin loading, and for repairing steel hopper cars.

A key, guiding the standard in the shell, prevents the head of the jack from turning and slipping out of place when the jack is operated. This is a valuable time saver over the make-shift methods of using ordinary jacks with heads that turn with every stroke of the operating lever, which twist the jack out of place and make repeated settings necessary. The DUFF-NORTON positive Stop, first used in our journal jacks or low height ball-bearing screw jacks, is also incorporated in the No. 3520.

The ratchet is so designed that a powerful leverage is possible over a wide angle of operation. The operating strokes may be as long or as short as the operator's position and "elbow room" will permit.

The guide key for the standard in the base is of the disengaging type, permitting it to be easily withdrawn by merely pressing down the tail, thereby permitting the standard to run down.

The gears are of steel, machine cut, running on hardened steel ball races and micro-chrome balls. The screw is heat treated; the nut is of hard bronze. The standard, or ram, is of steel, accurately machined; the base is of malleable iron.

No. Jack	Tons Capacity	Closed Length	Runout or "Raise"	Weight in Lbs.		Code Word	List Price
				Jack	Lever		
3520	25	20"	13"	82	10	Harry	\$85.00

Operating Lever—Of steel, $1\frac{1}{8}$ inch by 36 inches long, furnished with each jack.

Duff-Norton Telescope Screw Jacks



No. T-14

Capacities—10 to 25 Tons

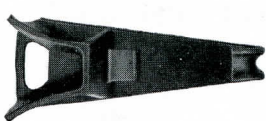
Note the very high raise of these jacks—almost as great as the height of the jacks themselves when closed. They have still another advantage over the ordinary screw jacks, in that the load can be raised much more rapidly and the jacks can be used in close quarters because of the ratchet and lever construction.

The base is made of heavy cast iron and contains a machine cut nut in which the screws operate smoothly and easily. There are only eleven parts to the entire jack. Traversing bases can be used in connection with these jacks for horizontal moving. Iron pipe (not supplied) can be used as an operating lever.

These jacks are used for bridge work, concrete form work, steel car repairing; and by contractors for general construction work.

Jack No.	Capac. Tons	Height Closed Inches	Raise Inches	Diam. of Base Inches	Weight Pounds	Code Word	List Price
T-11	10	8	7	7 $\frac{1}{8}$	37	Iago	\$22.00
T-12	10	10	9	7 $\frac{3}{4}$	42	Ibis	25.00
T-13	15	13	14	8	62	Icho	30.00
T-14	20	16	18	8 $\frac{3}{8}$	75	Inset	34.00
T-15	25	16	17	8 $\frac{3}{8}$	85	Ieng	40.00
T-16	25	19	22	9 $\frac{1}{8}$	127	Ifat	45.00

Duff-Norton Tie Spacer



Top View



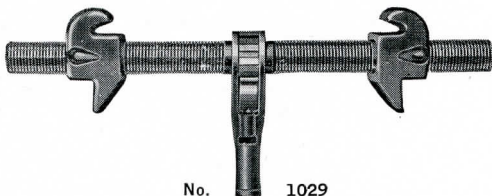
Side View

A newly designed, simple device acting effectively with any make of track jack—AN EXCLUSIVE FEATURE. ONLY THE TIE TO WHICH THE JACK IS APPLIED WILL BE MOVED. No other tie is disturbed in the least.

Spacer is quickly and easily placed on either rail for moving tie in either direction, locking around the flange of the rail. Head of the jack is placed against side of Spacer, foot of jack against tie to be moved.

Tie Spacer	Weight	Weight of Rail	Code Word	List Price
No. 80	13 lbs.	75 to 90 lbs.	Zaawj	\$5.00
No. 95	13 lbs.	90 to 130 lbs.	Zabam	5.00
No. 135	15 lbs.	130 to 152 lbs.	Zadso	6.00

Duff-Norton Push and Pull Jack



No. 1029

Duff-Norton Jack No. 1029 is designed for pushing apart or pulling together structural members, walls, machinery, and equipment of different characters. With chains and hooks its range of application is greatly increased.

Jack No.	Capacity Tons	Dia. of Screw	Length Overall	Weight Pounds	Code Word	List Price
1029	10	2"	28"	50	Tefsl	\$25.00
1538	15	2½"	38"	97	Zacro	36.00

Jacks listed above are standard. However, this type Jack can be furnished in greater lengths. Prices on request.

Duff-Norton Genuine Barrett

Trip or Track Jacks

Single Acting

These Duff-Norton Genuine Barrett Trip or Track Jacks are of the suspended pawl type, which eliminates the use of a separate tripping device, the lower or short pawl serving as such. The upper or holding pawl has a Spring attached, which automatically forces it into position, leaving the lower or lifting pawl free for tripping. Having spring actuate holding pawl only is a great safety factor and eliminates possibility of accident. The hardened steel wearing plate at the top of the base casting increases the life of the Jack by absorbing natural wear of lifting rack against base casting. All parts in these Jacks are interchangeable except base and lifting rack, eliminating necessity of carrying large stock parts for repairs. Trip Jacks are intended for track work only, but pawls are readily accessible for manipulation by hand when desired to lower gradually. Furnished with square socket, for use with lining bar or crow bar.



No. 117

Jack No.	Capacity Tons	Height Inches	Raise Inches	Weight Pounds	Code Word	List Price
117	15	22	13	60	Disqu	\$21.00
217	15	16½	7½	52	Disom	19.00
517	15	11	5	40	Peace	19.00
617	15	28	19	75	Disxo	27.00

List Price Covers Square Socket to Fit Lining Bar or Crowbar.
Add \$1.00 to list price if round socket and wood operating lever are required. When ordering, specify style socket lever desired.

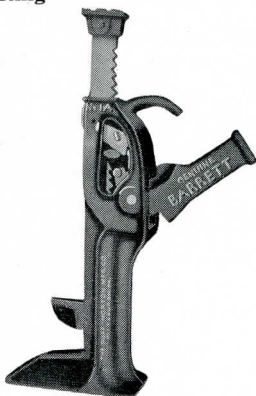
Duff-Norton Genuine Barrett

Trip or Track Jacks

Double Acting



No. 1-D



No. 1-A

These strong trip jacks are light, easy to operate and their maintenance is negligible. They are double acting, raising the load on both upward and downward stroke of operating lever.

No. 1-D is a Trip Jack with hook trip. Its action is quick and positive. An unusually popular Track Jack.

Nos. 1-A and 6-A have the regular trip—an exceedingly simple device which assures safe, quick, easy tripping. The trip is out of the way where it cannot be lost or knocked off.

The operating mechanism of Nos. 1-A and 6-A Jack is identical, so that pawls, trip, socket lever, and fulcrum pins are interchangeable.

Furnished with square socket for use with lining bar or crow bar. Add \$1.00 to list price if round socket lever and wood operating handle are required. When ordering, specify style of socket lever desired.

Jack No.	Capacity Tons	Height Inches	Raise Inches	Weight Pounds	Code Word	List Price
1-D	15	22	13	60	Zacor	\$21.00
1-A	15	22	13	58	Dart	21.00
6-A	15	28	19	73	Dosqu	27.00

Duff-Norton

Genuine Barrett Combination Trip and Automatic Lowering Jack



No. 110

This jack embodies a combination of the features of the automatic lowering and trip jacks. It is a veritable "jack of all trades." It can lift loads, lower loads gradually, or trip or drop loads from any elevation in its range.

Technically, it is a compound lever, double acting automatic lowering and trip jack. The load is instantly dropped by the small trip at top of base casting, or gradually lowered by raising lever at the side of the frame, whichever is desired.

This jack enjoys great popularity wherever it is used, due to its adaptability to so many widely different kinds of work.

Jack No.	Capacity Tons	Height Inches	Raise Inches	Weight Pounds	Code Word	List Price
110	15	22	13	59	Dike	\$21.00†

†List price shown covers square socket lever to fit lining bar. Add \$1.00 to list if round socket lever and wood handle are desired.

The New Duff-Norton Side Lift Track Jack



No. 304

Track Maintenance men will welcome the unusual advantages of this new Duff-Norton Double Acting Track Jack which has been designed with a convenient footlift at the **SIDE** of the frame instead of the usual location in the back.

This feature permits the lever to work parallel with the track or load to be raised and is of great advantage in track work where the rails are close to a platform or warehouse siding . . . also in narrow tunnels where the ordinary style of track jack would interfere with the free operation of the lever and would necessitate placing an ordinary jack inside the rails, which is prohibitive in track work.

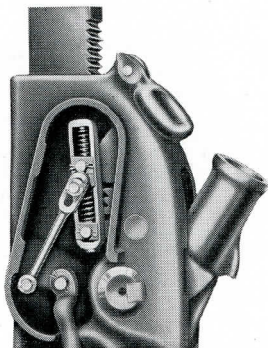
Jack No.	Capacity Tons	Height Inches	Raise Inches	Weight Pounds	Code Word	List Price*
304	15	22	13	60	Side	\$21.00

Furnished with square socket for use with lining or crowbar.

*Add \$1.00 to list price if round socket lever and wood handle are desired. When ordering, specify style of socket lever desired.

We present on the following pages the New Duff-Norton line of Automatic Lowering Jacks, equipped with new and improved Single Unit Automatic Lowering Mechanism.

U. S. Patent
1918934
Other Patents
Pending



Duff-Norton engineers have built into these jacks the last word in smooth, safe, and efficient lifting and lowering—the one and only line of jacks incorporating the world famous Genuine Barrett Mechanism.

Now, as an added feature in Duff-Norton Automatic Lowering Jacks, you get the advantages of the new and improved Single Unit Automatic Lowering Mechanism which provides a new measure of safety and smooth, easy lowering.

This spring actuated mechanism is self-contained in a housing and can be easily removed bodily from the jack for occasional adjustment or renewal after long service. There are no loose pieces, bolts or nuts to adjust within the jack.

The entire internal mechanism is contained in a cover-all housing, protecting the vital parts from dirt or exposure—a line of jacks combining rugged strength with extreme light weight—built to stand lots of punishment in the severest service.

Duff-Norton Genuine Barrett Automatic Lowering Jacks



No. 1022



No. 1528

Built in large variety of styles and sizes, Duff-Norton Genuine Barrett Automatic Lowering Jacks are adapted to every lifting requirement coming within range of their capacities.

Careful observation and tests of the performance of these jacks under actual service conditions prove that they are unexcelled in safety, low maintenance cost, and in easy and convenient operation.

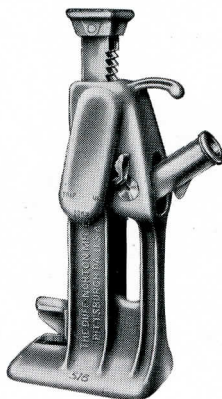
Duff-Norton Genuine Barrett Automatic Lowering Jacks are very widely used by industrial concerns, telephone and telegraph companies, street railway companies, steam railroads, mines, mills, contractors, truckmen, etc.

These Jacks can be readily furnished with curved top, grooved top for use with chain, or auxiliary shoe, for special applications, at slight extra cost. Specify clearly your requirements.

Jack No.	Capacity Tons	Height Inches	Raise Inches	Weight Pounds	Code Word	List Price
1022	10	22	12½	60	Grope	\$25.00
1522	15	22	12½	78	Grape	38.00
1528	15	28	18	91	Green	40.00
2028	20	28	18	94	Giant	45.00

No. 1022 Jack regularly furnished with double socket and 4 foot steel operating lever. Nos. 1522, 1528, 2028 furnished with single socket and steel operating lever, but double socket can be furnished if desired.

Duff-Norton Genuine Barrett Automatic Lowering Jacks



No. 516

Ideal for handling low loads in cramped quarters, these jacks are termed Automatic Lowering because they are ratcheted up or down notch by notch to raise or lower the load, the direction being controlled by a reversing lever at the side of the frame.

However, Jack Nos. 514-T, 516-T, and 521-T are all equipped with a quick-acting tripping device which will drop the lifting standard instantly when the jack is not under load if the operator desires to do so—a very desirable time-saving feature in coal mining service.

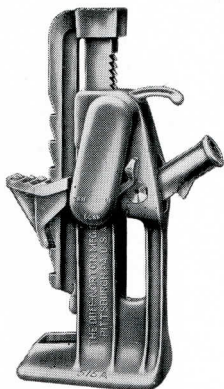
In addition to the standard flat top 5-ton single socket lever type jack shown above, you also have available Automatic Lowering Jacks with curved top in either single or double socket lever as desired. This applies to Types 514, 516, and 521; also 514-T, 516-T and 521-T.

The following specifications apply to both flat and curved top types.

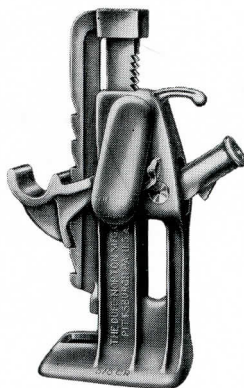
Jack No.	Capacity Tons	Height Inches	Raise Inches	Weight Pounds	Code Word	List Price
514	5	14	7½	28	Great	\$15.00
516	5	16	9½	32	Greas	16.00
521	5	21	14½	40	Grain	18.00

Furnished with round socket lever and 3 foot steel operating bar. When ordering, specify whether T-Type (Trip) or regular Automatic Lowering Type is desired,—also kind of top and socket.

Duff-Norton Genuine Barrett Automatic Lowering Jacks



No. 514-A



No. 516-CR

Nos. 514-A, 516-A and 524-A have the NEW DUFF-NORTON ADJUSTABLE FOOT LIFT which simplifies "spotting" and increases efficiency, making them more practical for low loads by increasing the foot lift strength. 514-A is especially recommended for motor truck work because of its low height.

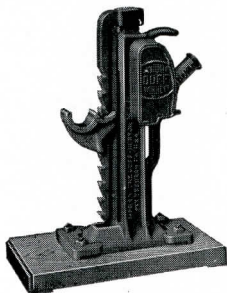
Nos. 514-CR, 516-CR and 524-CR are equipped with the NEW DUFF-NORTON ADJUSTABLE CABLE REEL LIFT incorporating a steel hook which can be placed anywhere on the rack. It is thus enabled to pick up reels of different diameters at any height with the least amount of adjustment. These jacks, thus equipped, are widely used in pairs by telephone and telegraph companies for supporting the ends of the bar which supports the cable reel.

Jack No.	Capacity Tons	Height Inches	Raise Inches	Weight Pounds	Code Word	List Price
514-A	5	14	7	28	Zacus	\$19.00
516-A	5	16	9½	40	Grase	17.00
524-A	5	21	14	40	Zadap	22.00
514-CR	5	14	7	28	Zadir	19.00
516-CR	5	16	9	34	Zados	20.00
524-CR	5	21	14	40	Zadpa	22.00

Furnished with round lever socket and 3-ft. steel operating lever.

Duff-Norton

Genuine Barrett Cable Reel Jacks—Single Acting



521-CR



539-CR

These jacks have been designed to meet the special requirements of telephone and cable companies, as well as the vast number of other users of jacks for handling Cable Reels of various diameters and weights.

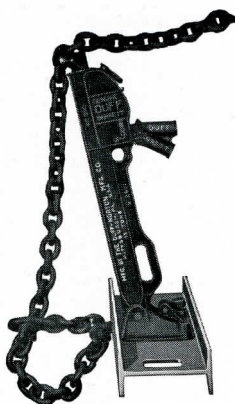
The No. 521-CR is equipped with the new Duff Adjustable Cable Reel Lift, incorporating a steel hook which can be placed at any point on the lifting rack. It is thus enabled to pick up Reels of different diameters at any height. No. 521-CR is especially adapted for warehouse use, handling cable, wire and hemp rope, leather belting, etc.

The No. 518-CR and No. 539-CR are equipped with extra long lifting racks, having hooks placed at various heights to make handling of Reels of different sizes rapid and convenient. These two sizes are recommended for general outdoor service for cable reels up to 90 inches in diameter.

Oak base with quick detachable clamps, and 4 foot steel operating lever furnished with each jack.

Jack No.	Capacity Tons	Height Inches	Raise Inches	Weight Pounds	Code Word	List Price
521-CR	5	21	14	68	Cabre	\$30.00
518-CR	10	38	12	108	Cabto	50.00
539-CR	15	39	11	138	Cabfu	65.00

Duff-Norton Genuine Barrett Pole Jack



No. 500

The new Pole Jack No. 500 possesses many new features that assure increased service and safety and make it unquestionably the most efficient of all jacks for lifting, straightening or moving poles of all kinds.

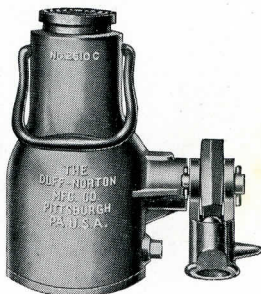
It eliminates the necessity of laborious digging around stumps before moving or straightening. It therefore saves an immense amount of time and expensive labor. It is able to move the heaviest pole with ease, regardless of size or depth in the ground. It is unusually efficient and can be depended upon at all times to lift much more than its rated capacity.

Jack No.	Capacity Tons	Height Inches	Raise Inches	Weight Pounds	Code Word	LIST PRICE	
						Complete	Without Chain
*500	15	37½	23	116	Polej	\$70.00	\$60.00

*With No. 500 steel operating lever, chain and I beam base are furnished when purchased complete.

Duff-Norton Journal Jacks

Low Height Ball-Bearing Screw Jacks



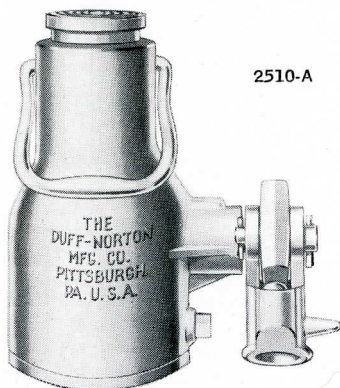
These Jacks represent our latest model of Journal Jacks. They incorporate all the distinctive qualities of our previous line of both Duff and Norton Journal Jacks, for many years the recognized standard Ball-Bearing Journal Jack of the railroad industry. Small and light in weight, easy to carry as a lantern, easy to operate, rapid raising and lowering, powerful in lifting ability, absolutely safe up to rated capacity.

Special features—one-piece Shell, cold-drawn seamless steel Lifting Standard, high carbon heat treated Lifting Screw, phosphor bronze Nut, high manganese chrome steel heat treated Gears, and pinion shank phosphor bronze bushed. No bolts or nuts to come loose. Special Positive Stop Safety Feature prevents Standard from being run out of base. Furnished with 3 foot solid steel operating lever with pinch bar end.

Jack No.	Capacity Tons	Height Inches	Raise Inches	Weight Pounds	Code Word	List Price
111-C	15	10	5	29	Cake	\$25.00
2509-C	25	9	4½	35	Cardo	36.00
2510-C	25	10	5½	36	Claro	36.00
3510-C	35	10	5½	50	Cisco	55.00
5010-C	50	10	4½	61	Cabel	95.00
*1007	10	7	2½	22	String	23.00

*1007 Cone Bearing instead Ball-Bearing.

Duff-Norton Aluminum Alloy Journal Jacks



2510-A

Something new . . . different . . . exclusive . . . proof of Duff-Norton leadership today as for many years past . . . by far the lightest, strongest, safest Car Inspectors' Journal Jack ever placed on the market . . . incorporating all the inherent advantages of the standard line of Duff and Norton Journal Jacks that have made DUFF-NORTON the world's largest manufacturers of jacks.

Think of it . . . an Aluminum Alloy Jack that will safely lift 15 tons, yet weighing only 19 pounds . . . the heavier type that will safely lift 25 tons and weighing only 26 pounds . . . practically 40% saving in weight . . . easy to carry as a lantern . . . yet possessing the same strength as former models . . . a jack that is, moreover, impervious to weather conditions, always rust proof.

Special features . . . one-piece Aluminum Alloy Shell. Lifting Standard, cold drawn seamless steel with forged steel top. Lifting Screw, high carbon steel, heat treated. Aluminum Bronze Nut. Gears of high manganese steel, heat treated. Pinion of a high manganese chrome steel, heat treated. Pinion bearing phosphor bronze bushed. **SPECIAL POSITIVE STOP SAFETY FEATURE** prevents standard from being run out of base. No bolts or nuts to come loose.

Jack No.	Capacity Tons	Height Inches	Raise Inches	Weight Pounds	Code Word	List Price
111-A	15	10	5	19	Prude	\$32.00
2510-A	25	10	5½	26	Press	45.00
3510-A	35	10	5½	36	Prune	65.00

Duff-Norton Genuine Barrett General Purpose Jack



No. 1523

Exceptionally useful and dependable general purpose jack for rough and ready service. Sturdily built, but extremely light in weight for capacity. Conveniently handled and spotted, and easily operated by one man. The Hinge or Pivotal Base permits the jack to be operated at any angle for shoving, pushing, etc.

All working parts are fully enclosed and protected from dirt. The inside mechanism is of the utmost simplicity. Having no machine screws, no parts can come loose or get out of adjustment. The spring mechanism is self-contained in a housing which can be removed bodily from the jack. No loose pieces, bolts or nuts to adjust within the jack.

Steel chain fits into slots on top of jack and can be used as a sling to engage various objects. Double Socket Lever aids effective operation in close and cramped quarters.

Jack No.	Capacity Tons	Height Inches	Raise Inches	Weight Pounds	Code Word	LIST PRICE	
						Complete	Without Chain
523	5	23	13½	40	Gars	\$22.00	\$19.00
1523	15	23	12½	67	Genpu	48.00	38.00

Furnished with 4 foot steel operating lever.

Duff-Norton Genuine Barrett Emergency Car Jack



No. 239—15 Tons Capacity

This jack has for years been popular as an emergency car jack for use by street railways in case of tieups, derailments, and accidents. It is of the single acting type, raising load on down stroke of lever only.

The swiveling claw is hung on a ball-and-socket joint and swings sideways 120 degrees, facilitating the placing of the jack in close quarters. It can be placed vertically or inclined up to a 15-degree angle, and will lift the full rated load both on top and toe, as long as the top is supported against the side of the load.

Many of the leading street railways of this country carry one on every car.

The important main lifting parts are drop forged of high carbon steel, subjected to special heat treatment.

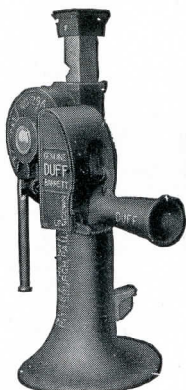
USES—The unusual swivel claw feature and the all-around adaptability of this jack has made it very popular in all industrial fields as a general purpose jack. It is extensively used for general service in tunnels, mines, shops, steel mills, and also by contractors, truckmen, and shipbuilders.

Jack No.	Capacity in Tons	Height of Top* Inches	Height of Toe* Inches	Raise Inches	Weight in Pounds	Code Word	List Price
239	15	22	3	10½	98	Emcy	\$55.00

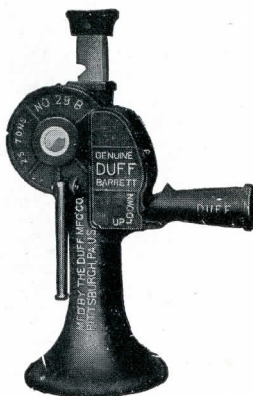
*When jack is lowered.

Furnished with a wooden operating lever.

Duff-Norton Genuine Barrett Geared Automatic Lowering Jacks



No. 29-A



No. 29-B

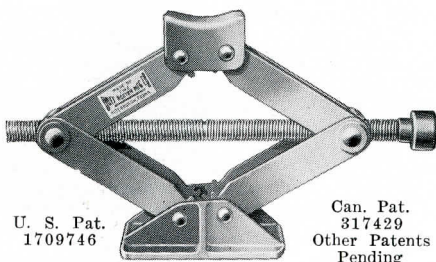
These jacks are single acting (raising and lowering load on down stroke of lever only) and the leverage is compounded by gears so that heavy loads may be lifted with ease. No. 29-A has foot lift. No. 29-B has no foot lift. Considerable reduction of weight has been obtained by refinement of design.

The gears are machine cut and heat treated, as are all other moving parts, resulting in quick, easy, and positive action. There are no intricate parts to wear out or break. The high class materials used in their construction afford the lightest possible weight for jacks as powerful as these and still assure a wide margin of safety. Convenient for the rapid handling of heavy loads of any character.

Jack No.	Supersedes Jack No.	Capacity in Tons	Height Bar Down Inches	Raise of Bar Inches	Weight With Lever	Code Word	List Price
29-A	29	25	27 $\frac{3}{4}$	15 $\frac{1}{4}$	159	Stani	\$110.00
29-B	29	25	27 $\frac{3}{4}$	15 $\frac{1}{4}$	150	Staro	100.00

Furnished with wood operating lever.

Duff-Norton Universal Automobile Jack



No. 407

This new, road-hugging, dwarf-jack is designed to fit under the axle of any modern car no matter how low-slung . . . a universal jack in every sense of the word because it meets the requirements of every type of automobile.

It combines low clearance with an extraordinary high lift. Slide this jack under the car with the long folding handle and you can lift the lowest axle a full 12½ inches from the road with ease . . . enough to clear the largest balloon tires . . . its double screw action applies a powerful lift to the load making it one of the fastest operating automotive jacks on the market.

Jack No.	Capacity	Height Closed	Height Open	Raise	Weight	List Price
407	1 Ton	4"	12½"	8½"	8 lb.	\$4.00

Duff-Norton Auto and Truck Jacks



Nos. 08 and 09



Nos. 100 and 200

Duff-Norton motor car and truck jacks meet, at a very moderate price, all requirements as to lifting capacity and different axle heights of the great majority of passenger cars and trucks. They are light and sturdy. All parts are heat-treated where necessary, and are accurately machined and carefully fitted together. All these jacks are furnished with steel levers.

The 1-ton capacity jacks are designed with a foot-lift which can be adjusted to any height desired, as will be noted in the illustration of jack No. 08. The No. 100 and No. 200 jacks are primarily intended for trucks and garage use.

Jack No.	Capacity in Tons	Height Inches	Raise Inches	Foot Lift Adjustment		Weight with Lever Pounds	Code Word	List Price
				Lowest	Highest			
08	1	11 $\frac{3}{4}$	6 $\frac{3}{4}$	4 $\frac{1}{2}$ "	11 $\frac{1}{2}$ "	11 $\frac{1}{4}$	Mecca	\$ 4.00
09	1	9 $\frac{3}{4}$	5	4 $\frac{1}{2}$ "	9 $\frac{3}{4}$ "	10	Mesin	4.00
100	3	11	6	....	.....	17 $\frac{1}{2}$	Comet	9.00
200	5	13	6 $\frac{3}{4}$	....	.....	30	Autojax	11.25

Duff-Norton Aluminum Alloy Airplane Jack

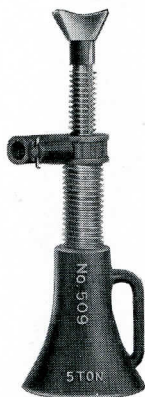


No. 5100-A

A new Telescope Screw Jack designed especially for equipment of all types of Airplanes. The use of Aluminum Alloy in the construction of these jacks affords a saving of approximately 40 per cent in weight. Here is a jack capable of lifting 6000 lbs. yet weighing only 13 lbs. Impervious to weather conditions. Always rust proof. The straight line side design permits close application to load. Used especially for making emergency repairs on forced landings. Carried as standard equipment on WAPITE Planes by South African Air Forces. Special designs quickly available for use on all sizes heavier than air machines. Principal dimensions of jack illustrated above are as follows.

Jack No.	Capacity Pounds	Height Closed Inches	Height Open Inches	Weight Pounds	Code Word	List Price
5100-A	6000	9½	20	13	Airpl	On Application

Duff-Norton Ball Bearing Motor Truck Jack Telescope Screw Type



No. 509

These strong telescope screw jacks are particularly useful for trucks equipped with pneumatic tires, and for any lifting work within their capacities where a low height jack with a high raise is required. Note that the raise of the screw in these jacks is equal or over the height of the jacks themselves.

They are convenient to spot and easy to operate under conditions ordinarily inaccessible with any other type of jacks. The screws advance one at a time. The large Ball Bearing on the top of the jack greatly reduces friction and increases lifting power.

Jack No.	Capacity Tons	Closed Height Inches	Raise Inches	Open Height Inches	Weight with Lever Pounds	Code Word	List Price
509	5	9½	9¼	18	19½	Zabma	\$8.50

Duff-Norton Cast Steel Base Locomotive Screw Jacks



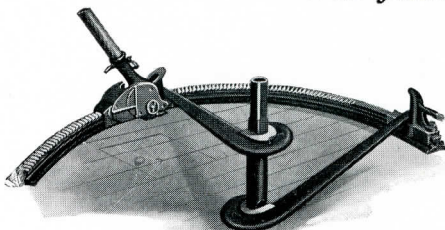
Duff-Norton Cast Steel Base Locomotive Screw Jacks represent the latest development in jacks of this type and are far superior to all other makes of similar design. Only in the Duff-Norton do you find the base casting made of Electric Furnace Steel, the lifting screw made from High Manganese Steel, the nut from Phosphor Bronze, a full complement of balls in the head—a construction that makes possible the handling of loads equal to their rated capacity with minimum effort.

Available in sizes and capacities as shown below.

Jack No.	Capacity Tons	Dia. of Screw Inches	Height of Stand Inches	Closed Height Overall Inches	Raise Inches	Dia. of Base Inches	Weight Lbs.	List Price
625-L	25	2	6	9¼	2½	6	29	\$20.00
825-L	25	2	8	11¼	4½	6½	34	21.00
1025-L	25	2	10	13¼	6½	6¾	40	22.50
830-L	30	2¼	8	11¾	4½	7	38	23.50
1230-L	30	2¼	12	15¾	8½	7½	48	25.00
1840-L	40	2½	18	22	14½	9¼	76	32.00
2440-L	40	2½	24	28	21½	10½	92	35.00

Duff-Norton

Genuine Barrett Oil Well Jacks



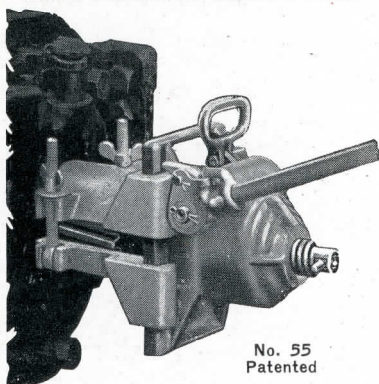
Double Acting Circle Jack for wrenching and unwrenching Oil Well Tools

No. 2-OW—This jack is built for wrenching and unwrenching the heaviest tools used in modern drilling operations. The rack is stiffened by a very wide flange, which overcomes the tendency of the rack to bend sideways under severe strains set up when handling very heavy tools. Rack plates are unnecessary. The socket lever is made of steel, assuring great strength. The trunnions, made in one piece with the socket lever, operate in closed-end, grease-packed bushings which keep out sand and dirt and eliminate frequent lubrication. Operating mechanism is of Genuine Barrett construction, double acting and automatically reversible.

No. 1-OW—This jack is double acting, moving one-half notch on each forward or backward stroke of the handle. Used extensively for shallow oil well and artesian well drilling. After setting up a joint, the jack will, by half a turn of the eccentric, automatically reverse itself sufficiently to relieve the pressure on the wrench handle; pawls can then be easily pulled out and jack pushed back to the end of the rack. Spring levers are entirely dispensed with.

Jack No.	Capacity Tools with Sqs. up to Ins.	Length of Rack	Radius of Rack Inches	Weight Complete Pounds	Code Word	List Price
1-OW	4	8' 5"	36	194	Uria	\$ 65.00
2-OW	5	9' 0"	42	341	Volt	100.00

Duff-Norton Pinion Puller



No. 55
Patented

The simplest, quickest, and most positive tool ever developed for use wherever motors or pinions are used extensively. The pull is absolutely uniform around the entire periphery of the pinion. Worm and screw action effects an almost unbelievable force. Made from the highest grade metals—housing and jaws are electric-steel castings; worm and screw are case hardened steel. Ball bearings used throughout.

In addition to pulling pinions, this unique tool can be very quickly and economically adapted to the removal of pulleys, small flywheels and other appurtenances from almost any kind of shaft.

Pinion Puller	Weight Pounds	Code Word	List Price
No. 55	50	Pinpu	\$120.00

Jaws furnished as ordered extra, as follows:

Jaws No.	Dimensions in Inches			Weight Pounds	Code Word	List Price
	A	B	C			
J-553	3½	5½	6¼	25	Pinaj	\$25.00
J-555	5	8¼	6¼	30	Pinja	30.00
J-557	7¾	10¾	6¼	39	Pinmi	40.00
J-5510	10	11½	6½	45	Pinix	45.00
J-5511	11	12½	6½	55	Pinol	50.00

A—Minimum outside diameter of pinion that can be pulled.

B—Maximum outside diameter of pinion that can be pulled.

C—Maximum allowable distance of inner edge of pinion from end of shaft.

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